

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 151 (NORTH POINT BLVD) AND NEW BATTLE GROVE ROAD IN BALTIMORE COUNTY, MARYLAND. MD 151 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 151 APPROACHES OPERATING CONCURRENTLY AND THE NEW BATTLE GROVE ROAD APPROACHES OPERATING CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR NORTHBOUND AND SOUTHBOUND MD 151 APPROACHES.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, VIDEO INTERFACE EQUIPMENT (1-8 CAMERAS) AND INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE "S" BASE MOUNTED CABINET.

PHONE DROP

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.
 ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-01 (SHOULDER WORK)	STANDARD NO. MD-104.02-13 (INTERSECTION FLAGGING OPERATION)
STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)	STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)	STANDARD NO. MD-104.04-15 (INTERSECTION LEFT LANE, TURN BAY)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ERIN KUHN ASSISTANT DISTRICT ENGINEER - TRAFFIC PHONE: (410) 229-2381	MR. MIKE PASQUARIELLO DISTRICT UTILITY ENGINEER PHONE: (410) 229-2341
MR. ANDRE FUTRELL ASSISTANT DISTRICT ENGINEER - MAINTENANCE PHONE: (410) 229-2361	MR. AVIJIT MAJI CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7630

<u>EQUIPMENT LIST "A"</u>		
A. EQUIPMENT TO BE SUPPLIED BY THE SHA		
<u>ITEM NO.</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
9104	1 EACH	CONTROLLER CABINET, SIZE "S" WITH CONTROLLER, VIDEO INTERFACE EQUIPMENT (1-8 CAMERAS).
9118	1 EACH	4 CHANNEL DETECTOR AMPLIFIER
9571	62 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT) :
	- 1 EACH	D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT
	- 1 EACH	D-3(1) SIGN (VARIABLE x 16 IN.) - POLE MOUNT
	- 2 EACH	M1-5(4) SIGN (78 IN. x 36 IN.) - MAST ARM MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

EQUIPMENT LIST "B"		
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR		
ITEM NO.	QUANTITY	DESCRIPTION
1001	3 EACH	MAINTENANCE OF TRAFFIC
2002	4 C.Y.	TEST PIT EXCAVATION
5002	55 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5005	55 L.F.	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	55 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	30 S.F.	5 INCH CONCRETE SIDEWALK
8001	32 EACH	12 INCH LED SIGNAL HEAD SECTION
8004	6 EACH	8 INCH LED SIGNAL HEAD SECTION
8012	1 EACH	EMBEDDED METERED SERVICE PEDESTAL
8014	1 EACH	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE)
8021	1 EACH	MAST ARM POLE & 70 FT MAST ARM ANY 'T' DIMENSION
8023	4 EACH	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
8024	1 EACH	REMOVE & DISPOSE MATERIAL & EQUIPMENT (PER ASSIGNMENT)
8027	1 EACH	TWIN MAST ARM POLE & 50' / 70' MAST ARMS ANY 'T' DIMENSION
8029	4 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8038	260 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8039	140 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8040	830 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8042	62 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8044	375 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8047	90 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG - THHN/THWN
8048	11 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8053	1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8057	95 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8058	2040 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8064	615 L.F.	ELECTRICAL CABLE - 3-CONDUCTOR NO. 12 AWG (B.W.G) TYPE T/C
8068	2 EACH	FURNISH AND INSTALL LED LUMINAIRES AND LAMPS

WIRING DIAGRAM

WIRING KEY

A, B, C, D, E, F } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

G, H, J, X } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

K, Y } 3-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) - TRAY CABLE

L, M, N, O } VIDEO CAMERA DETECTION LEAD-IN CABLE

P, Q, R, S } MICROLOOP PROBE LEAD-IN

T } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

U, V, W } 1-CONDUCTOR ELECTRICAL CABLE (NO. 8 A.W.G.)

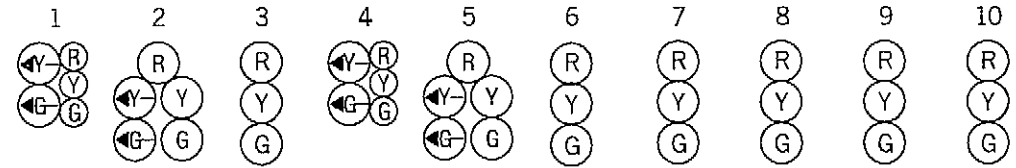
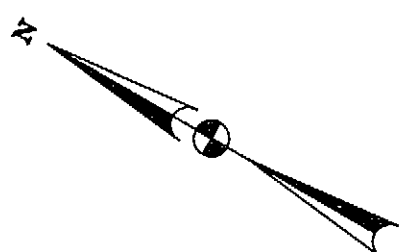
ML - MICROLOOP PROBE SET

PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE


PT - PROPOSED UNDERGROUND TELEPHONE SERVICE

⊕ - 3/4 IN. X 10 FT. GROUND ROD

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	
PHASE 1 AND 5	R +G-	R +G-	R	R +G-	R +G-	R	R	R	R	R	
1 AND 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6										
PHASE 1 + 6	R	R	R	G +G-	G +G-	R	R	R	R	R	
1 + 6 CHANGE	R	R	R	G +Y-	G +Y-	R	R	R	R	R	
PHASE 2 + 5	G +G-	G +G-	G	R	R	R	R	R	R	R	
2 + 5 CHANGE	G +Y-	G +Y-	Y	R	R	R	R	R	R	R	
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	
PHASE 4 + 8	R	R	R	R	R	R	G	G	G	G	
4 + 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	



**WHITMAN, REQUARDT
& ASSOCIATES, LLP**
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STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 151 (North Point Blvd) and New Battle Grove Road
Dundalk, MD

GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE 12/29/2013 CONTRACT NO. XY1255185

DESIGNED BY S. Bloss COUNTY Baltimore

DRAWN BY S. Bloss LOGMILE

CHECKED BY N. Leary TMS NO. L798

F.A.P. NO. TOD NO.

TS NO. 638

DRAWING **TSP-3** OF 3

SHEET NO. 3 OF 3

BY: sbloss